



Application of IOT for Home Security System

Ashish .R. Singh¹, Sumant Chad², Dr. Jyoti Kharade³, Prof. Smita Kapase⁴

MCA Student^{1,2}, Associate Professor^{2,3}

Department of Information Technology

BVIMIT, Navi Mumbai, India

Abstract:

Home Security System's main objective is to make a system that will give more secure home lock services. The specific users will have a particular finger print pattern for unlocking. By using this finger print pattern user can unlock the door by which it increases the security level and letting the right people in your family, friends to your home. Smart door locking system is not a new concept. However, with the advancement in technology, these systems also have become more advanced. The topic i.e. Home Security System described in this paper is designed for multi user operations and also provides more security to our home. With the Home Security System by using smart phone you are always touch to your home or control of your front door, and can easily make your home more securable.

Keywords: Internet of Things (IOT), Door lock system, Digital door locks Introduction

I. INTRODUCTION

The new technology of door locking system introduces us to the smart lock system. A Home Security System is an electro mechanical lock which is designed to perform locking and unlocking operations on a door when it receives such instructions from an authorized device using a wireless protocol and a cryptographic key to execute the authorization process. Your smart phone is now a smart key and more. Lock and unlock your door, create virtual keys for guests, and keep track of who comes and goes, all from your iOS (Originally iPhone OS) or Android smart phone. Your front door is about to get a lot smarter, prettier, and more connected. Home Security System provides everything you need for total and secure control over your front door, from anywhere. It includes doorbell with 1800 camera, latch system to open or close the door.

Objectives:

1. To review different technologies that is used for the door locking system.
2. To propose conceptual model IOT based door locking system.

II. LITERATURE SURVEY

The idea of Home Security System gets from the Internet of Things (IOT), as there are many new technologies which were introduced by IOT. These technologies are wireless and are connected with your devices so that you can operate it from anywhere you want. With the fast growing of technology, the lock has evolved from mechanical type into electrical and electronic type locks. There are many technologies used in the markets as a locking system for securing our home by using several devices.

Following are the different technologies that are used for the door locking system:

- Password Based System

- It is a programmable electronic code device.
- It is also called an integrated combinational lock.
- It is programmed in such a way that user will enter the password by using keypad and can get access or can be allowed to enter in the house.
- But this system can be used or managed from one place only.
- The limitation is that it can easily be cracked and passwords can be known so that one can easily get enter into your house.
- Another disadvantage is that when someone tries to crack the password the notification alert will not get to the user.

• Smart Card Based System

- It is a programmable electronic card device.
- User has to inset a card and press the button

• Tapp Lock

- It is also a programmable electronic device.
- The fingerprint is detected to unlock the lock.

The device name Home Security System is loaded with new functions, it has doorbell with 180-degree camera with outgoing and incoming audio function and there will be a fingerprint technology on the door latch which detects the person fingerprint and grant access to them. The camera will get activated if the sensor feels the movement near the door and at the same time when the doorbell is pressed or the latched is tried to be open the camera activates automatically and the camera will be in the activated mode till the time door is closed. When someone wants to enter in the house the person will press the doorbell, if the owner is in the house

he/she will open the door or if the owner is not in the house at that time the alert message will be sent to the owner, the owner check the message and will grant permission according to them if they want to give permission to that person.

The owner will generate a key when the alert is shown and the

- It has the function of alarm alert and it is an key generated will be a onetime key which gives the access to unbreakable steel body.
- But the limitation of this device is that the shape of the device is same as the ordinary locks.
- Owner has to add an additional latch to put this lock or he has to put a steel chain on the doors by which grace of the door is deteriorating.

III. METHODOLOGY

It is conceptual paper secondary data like conference journal paper have been reviewed. To understand the Door Locking Security thread & need for secure home.

IV. IOT BASED DOOR LOCKING SYSTEM

The proposed IOT based door locking system is a new concept which is a locking system with finger print function which differ it from other lock systems available in the market. the person. Every time an unknown person wants to get into the house a new key will be generated by the owner and at the other hand the family members doesn't need a key they can directly get into the house because their fingerprints are registered in the system and the system detects the fingerprint and unlocks the door. The door can also get open automatically by the function of sensor, any one member of the family who stays at the home most of the times, will be registered in the system and when that person come near the door the door will open automatically for that person only. At the same time if the unknown person tries to open the door, the camera will get activated and the alert message will be sent to the owner, alarm will be raised with the recording of the person and the owner can complain with the proofs if they want.



Figure.1. Home Security System

Fig 4.1 explains the concept of Proposed System I.e. Suppose if unknown person tries to open the door then the camera within the bell will be automatically activated and will capture

the image of the person and at the same time will automatically send image to the owner of the house.

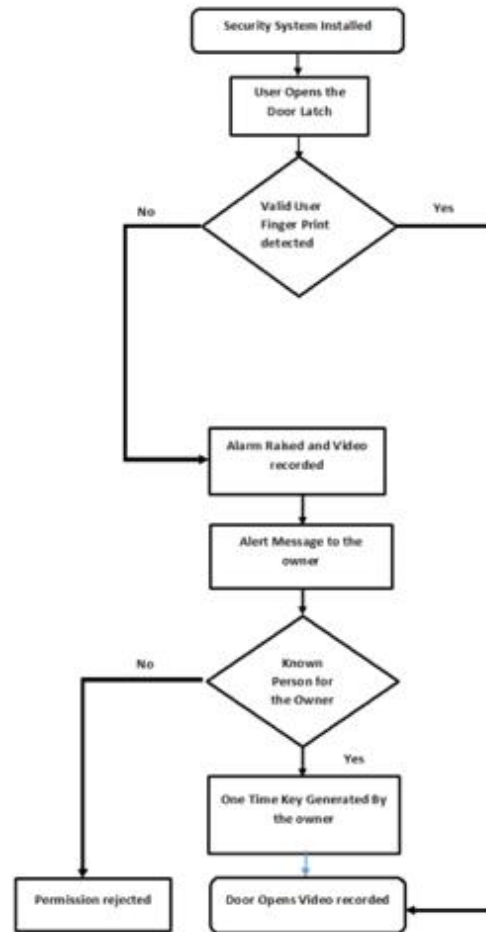


Figure.2. Flow of Security System

V. CONCLUSION

The system is basically a home security system which is for the people who are not at home during the day and would like to know who and when visited to their houses. So, this system is a good option for the security of their houses. It is an advanced security system with new technology, which the user or can say the owner of the house can trust and easily use.

VI. REFERENCES

- [1]. https://en.wikipedia.org/wiki/Internet_of_things
- [2]. Development of The Multi-Level Fusion based Security System-2015
- [3]. Smart Home based on GSM technology-2013
- [4]. Wireless Home Security System with Mobile-2011
- [5]. Web Based Real-Time Home Automation and Security System-2015.
- [6]. A Digital Door Lock System for Better Security and Usability-2015.
- [7]. Design and construction of Door Locking Security System.